

Course Project

INDEPENDENT PROJECT

Context

I incorporated a course project in my class BIO 295 Islands & Evolution (Spring 2014) at North Carolina State University. For this independent project students worked in teams and created a movie based on a recent research paper from one of four leading scientific journals (see [Rubric & Instructions](#)). In addition, they incorporated three theory concepts from class to frame the study they were presenting. Students were required to submit a draft script, a final script and the movie.

The goals for this project were for students to:

- practice scientific literature search
- practice reading (and comprehending) a scientific paper
- focus on selected subjects in greater depth than covered in class (case study and three theory concepts)
- practice skills for communicating science (including general audiences)
- give students a chance to be creative and approach a subject in a non-traditional manner

I chose the movie-approach because it worked well with the goals I had set for the project. Also, I have been observing a growing popularity of using audiovisual material when people talk about science. For instance, short movie sequences are often used in scientific presentations (e.g., at conferences or departmental seminars) and many professional meetings feature short movie competitions (e.g., NESCent Evolution Video Contest 2014). Moreover, educational video material is prominent on social media channels like YouTube (e.g., Khan Academy). Furthermore, this project helped students to think about the challenge of communicating science, especially to non-scientific audiences. When I provided feedback on students' draft scripts, I included the following sentence for all students:

Think about this movie as telling a story. You are telling the story of the paper you chose. Treat this movie as if you will show it to your grandmother and she needs to understand what has been done in the study you chose and why it matters!

Reflection

The independent project fulfilled the goals I had set for it and students did a fantastic job overall. They chose interesting studies and creative ways to present them as movies. I was particularly impressed by the diversity of techniques students used.

Although all groups did an excellent job in creating the movie, some groups did not live up to this level in their final scripts. For instance, there were some issues with their descriptions of theory concepts. I believe these problems were due to the high level of comprehension this task required paired with not enough guidance provided on my part. Some final scripts also appeared sloppy (confusing sentence structures, words missing, obvious grammar mistakes) and some teams did not update their movie plot compared to the draft script. Admittedly, there was not a lot of time for this project and for a 2-credit-hour class, there was a lot of work required. It seemed to me that students allocated the bulk of their time to making the movie and ran out of time when working on the final script. What is more, I did not give students very specific instructions for their draft scripts. This was in part because I had never done this project with students before and I wanted to get a sense for how

students would approach it. When I gave students more specific instructions for the final script, it seemed that they were already set on what they had written in the draft script and made only minor changes.

Overall, I think it was not a good idea to call the first submission a “draft”. Although my general thought was that they would alter this draft script for their final submission, in hindsight, it might have been better to ask students to submit a “check-in” paper to make sure they are on track with the project instead of the draft (e.g., ask them to answer several questions regarding their progress). Also, I think it might be better to rename the final script to something that does not suggest a film script might be the only element that is required for submission (maybe something like finale rationale & script).

In the future, I would also adjust the nature of incorporating three theory concepts from class. The goal for this task was for students to learn about three subjects in greater depth than covered in class. However, it appeared that students mostly repeated what they learned in class with various levels of accordance. For instance, I could adjust this section to be a short review paper. Instead of three concepts, I will let students choose one concept that relates to the study they chose and ask them to write approx. one page with a few primary literature citations.

I would also consider providing more formal technical support for less tech-savvy groups. This could be done by simply offering several check-in meetings with the instructor. Another option would be to set this up as an interdisciplinary project by collaborating with students who study film-making or design. As a third alternative, I could invite staff from the library who also offer technical support or set up formal meeting sessions (this option was available in this case but, to my knowledge, no groups utilized it).

Lastly, I would structure this project to allow more time overall and include more check-in points where students will be required to submit parts of their final papers/scripts.

Overall, this project was a good representation of my [teaching philosophy](#) of using innovating ways to get students excited about a subject. It also required higher order thinking skills and served as a good complement to the final exam.